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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,867	10/11/2005	Bernardus Henricus Krabbenborg	NL030402US1	4477

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EXAMINER	
MAI, TIEN HUNG	
ART UNIT	PAPER NUMBER
2836	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,867	KRABBENBORG, BERNARDUS HENRICUS	
	Examiner	Art Unit	
	Tien Mai	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15, 18* is/are rejected.

7)☒ Claim(s) *16 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/11/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The application number 10/552867 for a "method and apparatus for integrated circuit protection" filed 10/11/2005 has been examined.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is objected under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the small signal part" in line 3. There is insufficient antecedent basis for this limitation in the claim. "The small signal part" is interpreted by examiner as "a small signal part". The following prior art based rejection is based on such assumption.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall et al. (US Pat. 5,267,118, hereinafter Marshall) in view of Sklar (US Pat. 3,182,201, hereinafter Sklar).

Regarding to claims 1, 9, and 18, Marshall discloses method and apparatus for thermally separating devices on a power integrated circuit, the integrated circuit (fig. 1) comprising two or more transistors (12-18), the method comprising the steps of: providing temperature measurement means in or on each of said transistor; and if the

measure temperature in any of said transistors exceeds a first predetermined threshold temperature, disabling at least one of said transistors for a predetermined period of time (abstract, col. 2, lines 49-58). Marshall does not disclose the method being characterized in that the temperature measurement means comprise means for measuring current through a reverse biased diode provided in respect of each of said transistors. However Sklar disclose apparatus for detecting localized high temperatures in electronic components, the apparatus (fig. 3) comprise a temperature sensing component may include a reverse biased zener diode as the heat measuring element, as long as the heat sensor has about the same temperature characteristics of a transistor (col. 4, lines 14-30). It would have been obvious for a person of ordinary skill in the art at the time the invention was made to have used reverse biased diode as taught by Sklar in Marshall's power integrated circuit because zener p-n junction diode thermal characteristics are similar to the transistor characteristics; so zener diode provides precise temperature sensor to protect transistors (col. 4, lines 14-30).

With regard to claims 2, and 12, Marshall discloses that the transistors are power integrated circuit chip (10) (abstract).

With regard to claims 3, and 15, Sklar discloses that the reverse biased diode is comprises a reverse biased pn junction in said integrated circuit (col. 4, lines 14-30).

With regard to claims 4, and 10, Marshall discloses that the step of providing temperature measurement means in respect of a small signal of the integrated circuit, and if the measured temperature of said small signal part of the integrated circuit

exceeds a second predetermined threshold temperature, disabling said transistors for a predetermined period of time (5 ms) (fig. 7, col. 4, lines 20-45, and col. 6, lines 33-66).

With regard to claims 5, and 11, discussed in claim 1.

With regard to claim 6, Marshall discloses that the first predetermined threshold temperature (57) is greater than the second predetermined threshold temperature (58) (see fig. 7).

With regard to claim 7, Marshall discloses that wherein said first and second predetermined threshold temperatures are in the range 130° – 150°C (col. 6, lines 47-55).

With regard to claim 8, Marshall discloses that said predetermined period of times is approximately 5 milliseconds, and the method includes the step of automatically enabling the transistor when said predetermined period of time has elapsed (col. 6, lines 47-66).

With regard to claim 13, Marshall discloses that shut-off means for disabling all of said transistors in the event that the temperature in any of said transistors is determined to exceed said predetermined threshold temperature (col. 4-5, lines 46-68, lines 1-3).

With regard to claim 14, Marshall discloses that timer means for causing said transistors to be enabled when said predetermined period of time has elapsed (fig. 6 col. 6, line18-32).

Claim Objections

Claims 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Mai whose telephone number is 571-270-1277. The examiner can normally be reached on M-Th: 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TM

Stephen W. Jackson
3-27-07

STEPHEN W. JACKSON
PRIMARY EXAMINER